

REMARKS

In response to the Final Office Action dated March 24, 2004, Applicants respectfully request reconsideration. To further the prosecution of the present application, each of the rejections set forth in the Office Action has been considered and is addressed below. The application is believed to be in condition for allowance.

Rejections Under 35 U.S.C. §102

Claims 1-13, 15-21, 23-41, 43-57, and 60-66 stand rejected under 35 U.S.C. §102(e) as purportedly being anticipated by U.S. Patent No. 6,484,173 (herein referred to as O'Hare). Applicants respectfully traverse this rejection.

Initially, Applicants wish to clarify an inadvertent mischaracterization of O'Hare made in Applicants' response filed December 29, 2003. At page 19, lines 13-16 of Applicants' December 29, 2003 response, Applicants mistakenly characterized the system calls of O'Hare as performing both administrative operations and data accesses (i.e., read and write operations). For this reason, Applicants argued that a system call does not meet the definition of Applicants' claimed non-media access request. Upon reconsideration in preparing this response, the undersigned now believes that O'Hare does not disclose system calls that directly read and write data, but rather only those that perform administrative-like operations (O'Hare, col. 1, lines 29-36). Thus, Applicants withdraw any assertion that the system calls of O'Hare perform read and write operations.

Nevertheless, Applicants' claims patentably distinguish over O'Hare for the reasons discussed below.

Claim 1

Claim 1 is directed to a method for managing access to a shared resource by a plurality of devices that are coupled to the shared resource via a network. The method includes acts of: (a) in response to a non-media access request by a first of the plurality of devices to a logical device at the shared resource for which the first device has no data access privileges, determining, based, at least in part, on an identity of the first device, whether the first device is authorized to have non-media access to the logical device; and (b) authorizing the non-media

access request when it is determined in the act (a) that the first device is authorized to have non-media access to the logical device.

In Applicants' response of December 29, 2003, Applicants argued that O'Hare does not disclose the authorizing of a non-media access request to a logical volume for a device that lacks data access privileges to that logical device (*see* Applicants' response of December 29, 2003, page 19, lines 20-24).

In response to that argument, the Office Action asserts that when a pass override is set, system calls to a data storage device are permitted even when data access privileges are prevented to that device (*see* Office Action, paragraph 7, pages 12-13). In O'Hare, a pass override allows all system calls to a data storage device, regardless of any access privileges for the device or the requestor (*see* O'Hare, col. 13, lines 23-26 and Figure 6, steps 212 and 214). However, when a pass override is set, the decision to allow a system call is not made based on the identity of the host computer making the system call. A pass override causes all system calls to be allowed regardless of the identity of the host computer making the request. This can be seen in Fig. 6, wherein the identity of the requestor is not considered in the application of the reject (step 204) or pass (step 212) overrides, but is considered (*see* e.g., steps 216, 220, 226, and 230) only when no override is set.

By contrast, claim 1, as amended, recites: "determining, based, at least in part, on an identity of the first device, whether the first device is authorized to have non-media access to the logical device." Determining whether the device is authorized to have non-media access to the logical volume based, at least in part, on the identity of the device is different from determining whether a device is authorized to access a logical volume based on whether a pass override is set. For example, the pass override feature of O'Hare must be set (or not) consistently for all requestors, such that access cannot be separately controlled based on the identity of the requestor.

Claims 2-14 depend from claim 1 and are patentable for at least the same reasons.

Claim 15

Claim 15 is directed to a method for managing access to a storage system by a plurality of devices that are coupled to the storage system via a network, the storage system including a

plurality of logical volumes of data. The method includes acts of: (a) maintaining, in a data structure that is accessible to a filter that controls access to each of the plurality of logical volumes, configuration information identifying each logical volume of the plurality of logical volumes to which data access by a first device of the plurality of devices is authorized; (b) in response to a non-media access request by the first device to a first logical volume for which the first device has no data access privileges, determining, based, at least in part, on an identity of the first device, whether the first device is authorized to have non-media access to the first logical volume; and (c) authorizing the non-media access request when it is determined in the act (b) that the first device is authorized to have non-media access to the first logical volume.

As should be appreciated from the foregoing, O'Hare does not teach or suggest determining, based, at least in part, on an identity of the first device, whether the first device is authorized to have non-media access to the first logical volume. Therefore, it is respectfully asserted that claim 15 patentably distinguishes over O'Hare, such that the rejection of claim 15 under §102 as being anticipated by O'Hare should be withdrawn.

Claims 16-27 depend from claim 15 and are patentable for at least the same reasons.

Claim 28

Claim 28 is directed to an apparatus for use in a computer system including a plurality of devices, a shared resource, and a network that couples the plurality of devices to the shared resource, the apparatus comprising: an input to be coupled to the network; and at least one filter, coupled to the input, that is responsive to a non-media access request by a first of the plurality of devices to a logical device at the shared resource for which the first device has no data access privileges, to determine, based, at least in part, on an identity of the first device, whether the first device is authorized to have non-media access to the logical device, and to authorize the non-media access request when it is determined that the first device is authorized to have non-media access to the logical device.

As should be appreciated from the foregoing, O'Hare does not teach or suggest an apparatus that includes at least one filter at least one filter to determine, based, at least in part, on an identity of the first device, whether the first device is authorized to have non-media access to

the logical device. Therefore, claim 28 patentably distinguishes over O'Hare, such that the rejection of claim 28 under §102 as being anticipated by O'Hare should be withdrawn.

Claims 29-42 depend from claim 28 and are patentable for at least the same reasons.

Claim 43

Claim 43 is directed to a computer readable medium comprising a data structure relating to access management by a plurality of network devices to data stored on a plurality of logical devices. The data structure includes a plurality of records, each corresponding to one of the network devices, and a first record corresponding to a first of the network devices and including configuration information identifying each of the logical devices to which data access by the first network device is authorized. The first record further includes visibility information identifying whether the first network device is authorized to have non-media access to a first of the plurality of logical devices when the configuration information corresponding to the first network device identifies that no data access to the first logical device from the first network device is authorized.

As should be appreciated from the foregoing, there is no teaching or suggestion in O'Hare of providing a data structure relating to access management for network devices wherein a record in the data structure includes visibility information identifying whether a first network device that has no data access privileges to a first logical device is nevertheless authorized to have non-media access to the first logical device. Therefore, it is respectfully asserted that claim 43 patentably distinguishes over O'Hare, such that the rejection of claim 43 under §102 as being anticipated by O'Hare should be withdrawn.

Claims 44-47 depend from claim 43 and are patentable for at least the same reasons.

Claim 48

Claim 48 is directed to an apparatus for use in a computer system including a plurality of devices, a storage system, and a network that couples the plurality of devices to the storage system. The apparatus comprises: an input to be coupled to the network; a data structure that stores configuration information identifying each logical volume of data of a plurality of logical volumes of data stored on the storage system to which data access by a first device of the

plurality of devices is authorized; and at least one filter, coupled to the input, that is responsive to a non-media access request by the first device to a first logical volume of data of the plurality of logical volumes of data for which the first device has no data access privileges, to determine, based, at least in part, on an identity of the first device, whether the first device is authorized to have non-media access to the first logical volume of data, and to authorize the non-media access request when it is determined that the first device is authorized to have non-media access to the first logical volume of data.

As should be appreciated from the foregoing, O'Hare does not disclose an apparatus that comprises at least one filter to determine, based, at least in part, on an identity of the first device, whether the first device is authorized to have non-media access to the first logical volume of data. Therefore, it is respectfully asserted that claim 48 patentably distinguishes over O'Hare, such that the rejection of claim 48 under §102 as being anticipated by O'Hare should be withdrawn.

Claims 49-59 depend from claim 48 and are patentable for at least the same reasons.

Claim 60

Claim 60 is directed to a storage system comprising a plurality of storage devices that store a plurality of logical volumes; a data structure to store configuration information; and a filter to selectively forward non-media access requests from a first network device to a first logical volume when the configuration information identifies that no data access to the first logical volume from the first network device is authorized.

As should be appreciated from the foregoing, O'Hare does not teach or suggest a storage system that comprises a filter that selectively forwards non-media access requests from a first network device to a first logical volume when configuration information identifies that no data access to the first logical volume from the first network device is authorized. Therefore, it is respectfully asserted that claim 60 patentably distinguishes over O'Hare, such that the rejection of claim 60 under §102 as being anticipated by O'Hare should be withdrawn.

Claims 61-66 depend from claim 60 and are patentable for at least the same reasons.

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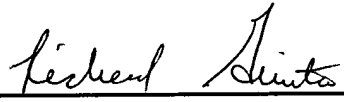
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CONCLUSION

In view of the foregoing amendments and remarks, this application should now be in condition for allowance. A notice to this effect is respectfully requested. If the Examiner believes, after this amendment, that the application is not in condition for allowance, the Examiner is requested to call Applicants' attorney at the telephone number listed below to discuss any outstanding issues relating to the allowability of the application.

If this response is not considered timely filed and if a request for an extension of time is otherwise absent, Applicant hereby requests any necessary extension of time. If there is a fee occasioned by this response, including an extension fee, that is not covered by an enclosed check, please charge any deficiency to Deposit Account No. 23/2825.

Respectfully submitted,
Steven M. Blumenau et al., Applicant(s)

By: 
Richard F. Giunta, Reg. No. 36,149
Wolf, Greenfield & Sacks, P.C.
600 Atlantic Avenue
Boston, Massachusetts 02210-2211
Telephone: (617) 720-3500

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